

FE338

WIRE DRAG

Diagram No. 1116-3

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

DESCRIPTIVE REPORT

Type of Survey .. Wire Drag

Field No. R/H-40-2-72

Registry No. FE-338WD

LOCALITY

State Texas

General Locality Gulf of Mexico

Sublocality Southwest of Heald Bank

1972-73

CHIEF OF PARTY
CDR L.E. Pickens

LIBRARY & ARCHIVES

DATE August 8, 1990

☆U.S. GOV. PRINTING OFFICE: 1985-566-054

FE338
WIRE DRAG

GP
11330
11343
11360
11340
411

HYDROGRAPHIC TITLE SHEET

R/H ~~40-2-73~~ - #H9300WD

40-2-72 - #H9341WD

40-3-72 - #H9342WD

recinded & changed to FE-338WD

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO. R/H ~~40-2-73~~

R/H 40-2-72 ✓

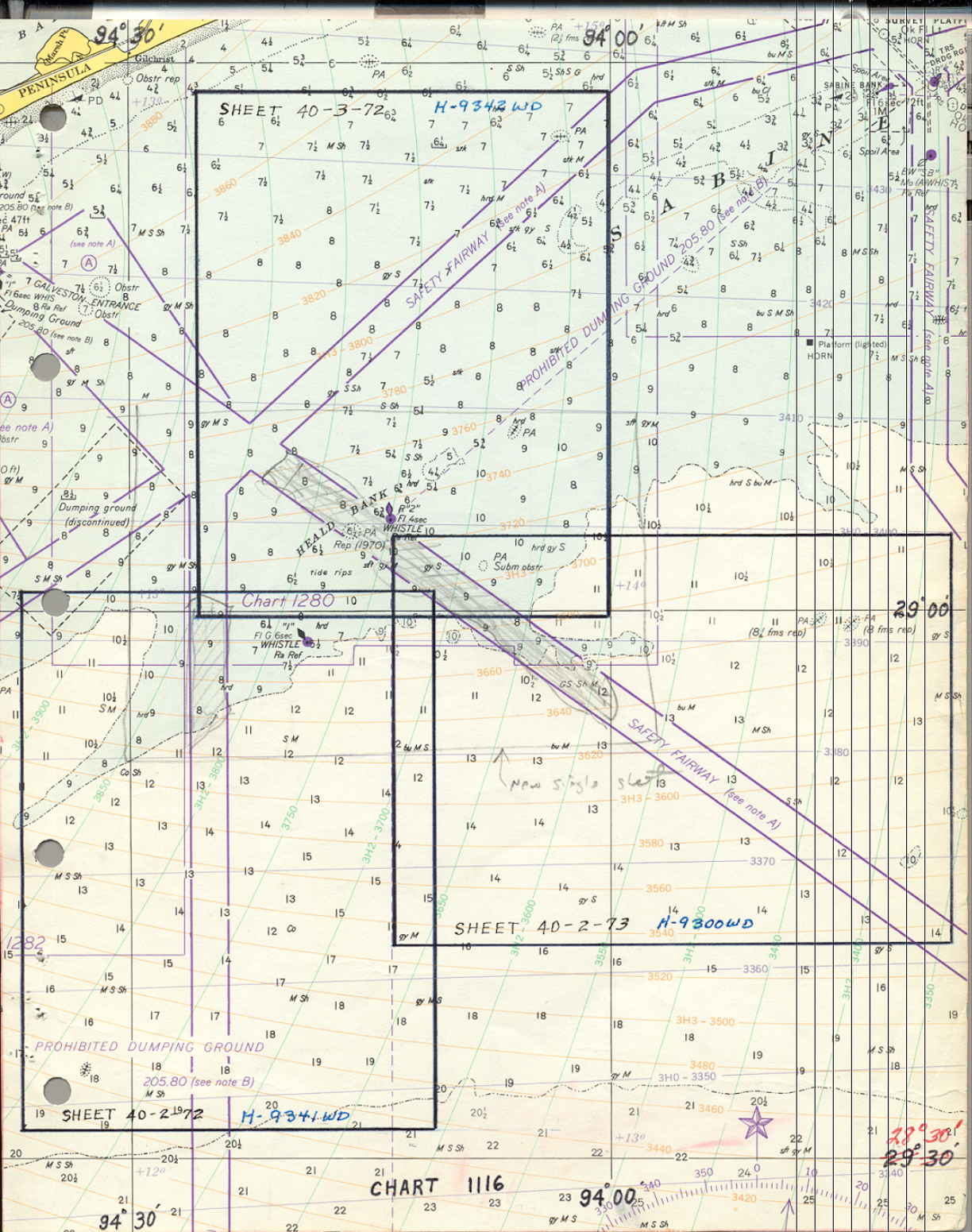
R/H ~~40-3-72~~State TEXAS ✓General locality GULF OF MEXICO - ~~SAFETY FAIRWAYS~~ ✓Locality GALVESTON Southwest of Heald Bank ✓

24 Oct. 1972 - 11 July 1973

Scale 1-40,000 ✓Date of survey 11 JUNE, 1973 ✓Instructions dated 26 JAN., 1973 ✓Project No. OPR - 479 ✓Vessel NOAA SHIPS RUDE & HECK ✓Chief of party CDR LEONARD E. PICKENS ✓Surveyed by SHIPS PERSONNEL ✓Soundings taken by echo sounder, ~~hand lead, xxx~~ ^{reconnaissance hydro.} & wire drag ✓Graphic record scaled by Ship's Personnel ✓Graphic record checked by Ship's Personnel ✓Protracted by Ship's Personnel ✓Automated plot by Calcomp 618 (AMC) ✓Limited & Modified Processing by Evaluation & Analysis Team (AMC) ✓Soundings in fathoms feet at MLW ~~XXXXX~~ BASED ON PREDICTED TIDES ✓REMARKS: Horizontal Datum : NAD 1927AWOIS / SURF ✓ 8/20/90 SJ ✓✓ XWW, 8/21/90

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PROGRESS SKETCH

OPR-479-R/H-73

WIRE DRAG: SHEET 40-2-72


GULF OF MEXICO

NOAA SHIPS RUDE & HECK

L.E. PICKENS, CHIEF OF PARTY

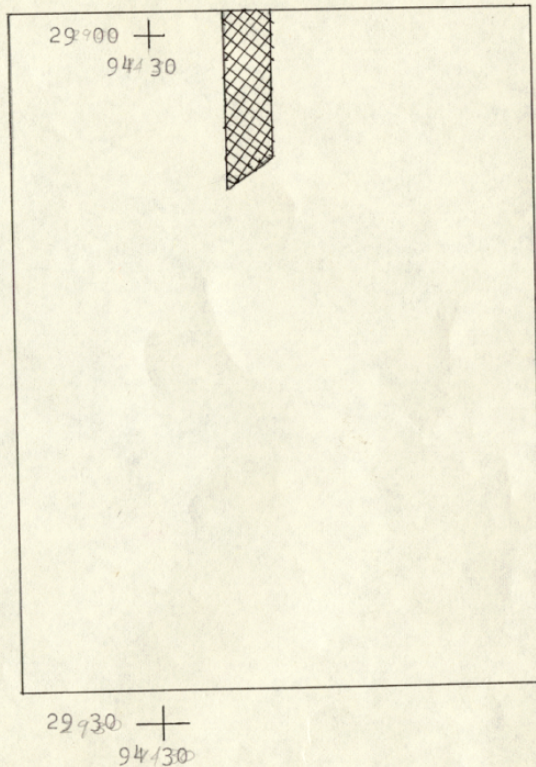
JUNE 1973

SCALE 1:460,732

 REPRESENTS AREA COMPLETED

SHEET 40-2-72 H-9341 WD

STATISTICS	LNM	SNM
	6.32	9.67



PROGRESS SKETCH

OPR-479-R/H-73

WIRE DRAG: SHEET 40-3-72

GULF OF MEXICO

NOAA SHIPS RUDE & HECK

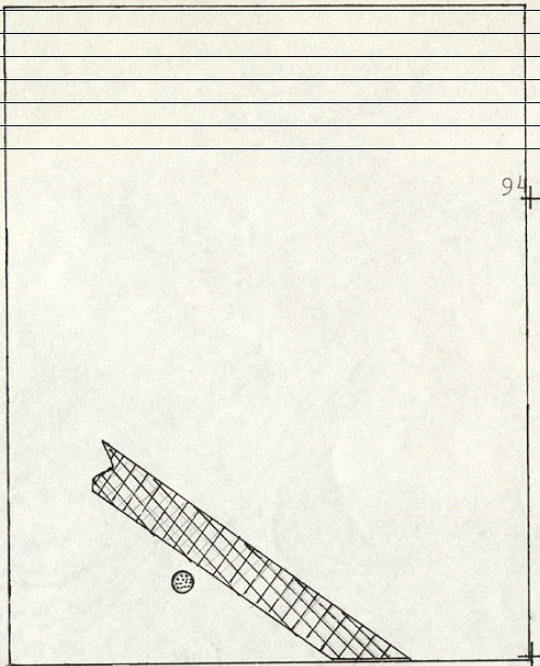
L.E. PICKENS, CHIEF OF PARTY

JUNE 1973

SCALE 1:460,732

94 30
+

94 00
+ 29 20



41 4-9857
my sketch H-97841



REPRESENTS AREA COMPLETED

SHEET 40-3-72 H-9342

STATISTICS LNM SNM
27.99 37.65



REPRESENTS HYDROGRAPHIC
INVESTIGATION OF REPORTED GROUNDING

LNM SNM
20.00 1.20

94 30
+

94 00
+ 29 20

PROGRESS SKETCH

OPR-479-R/H-73

WIRE DRAG: SHEET 40-2-73

GULF OF MEXICO

NOAA SHIPS RUDE & HECK

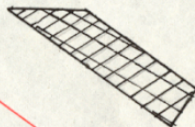
L.E. PICKENS, CHIEF OF PARTY

JUNE 1973

SCALE 1:460,732

+

+ 29 00



REPRESENTS AREA COMPLETED

SHEET 40-2-73 H-9300 WD

STATISTICS LNM SNM
23.95 29.60

A. AUTHORITY

The authority for this survey was Project Instructions DPR 479-RU/HE-73 Safety Fairways, Gulf of Mexico dated 26 January, 1973. Investigation of a reported grounding was added to the instructions via radio message received on 5 June, 1973. (See enclosed copy under Project Instructions.)

B. CHARACTER AND LIMITS OF WORK

The purpose of the survey was to prove or disprove the existence of underwater hazards to navigation in the Safety Approach Fairways to Galveston Bay, to investigate a reported obstruction near the tip of the Galveston South jetty, and to investigate a reported grounding west of the Southeast Fairway.

The boat sheet layouts were:

~~Sheet 40-2-73 LAT. 28°41'30"N to 29°04'00"N~~

~~LONG. 93°38'40"W to 94°13'30"W~~

Sheet 40-3-72 LAT. 28°59'30"N to 29°27'30"N

(H-9342 WD) LONG. 94°00'00"W to 94°25'50"W

Sheet 40-2-72 LAT. 28°31'30"N to 29°01'00"N

(H-9341 WD) LONG. 94°11'10"W to 94°36'50"W

*All considered as
FE-338 WD
R/H - 40-2-72*

The entire survey was done on a 1:40,000 scale.

C. CONTROL AND SHORELINE

Raydist DR-S Range-Range Control was used during all the fairway operations; the frequency was 3300.4 KHz resulting in a lane width of 45.39904 meters. No shoreline existed on any boatsheet.

One drag was done south of Galveston's South jetty to locate a reported

obstruction; combined electronic - visual control was used. - *Not included in this survey. Also noted elsewhere as an unrecorded drag.*

The "Green" Raydist station was "MOORE" located in south Galveston, and the "Red" station was "HANT", approximately 50 miles northeast of Galveston. Upon completion of operations "HANT" became the sight of the "Green" station and the "Red" station was moved to the Sabine Pass area; both stations are recoverable. A listing of all signals used is given in Attachment I. - *These stations have not been verified*

D. DATE OF SURVEY

Operations began on DPR 479, Galveston, Sheet 40-2-73 on 11 June and terminated on 22 June. Work on boat sheet 40-3-72 began on 25 June and ended on 11 July, 1973; ^{wiredrag} work on sheet 40-2-72 began on 10 July, 1973, and terminated on 11 July, 1973. *but reconnaissance hydrography just east of those drag strips was done on 24 Oct. 1972 and other recon. hydro (not plotted by the field) was done on 27 & 28 June 1973 and 10 July 1973.*

E. TIDE REDUCERS

~~The preliminary reduction of each days data was based on predicted tides; the actual tide data will be supplied by the Rockville office based on the tide gauge at the Galveston Pleasure pier.~~

Smooth Tides for June & July, 1973 are included in the survey records.

F. JUNCTIONS

All sheets junction satisfactorily. - *Not verified during modified processing.*

G. SPLITS

No splits exist. - *Not verified during modified processing.*

H. GROUNDINGS AND HANGS.

Occasionally the wire was deliberately set out aground and towed off the shoal areas; these areas were later covered by another drag. No significant

groundings were observed. *Concur - See also the Addendum, section 2.*

Only one hang was encountered; it was an I-beam near the Galveston South jetty. Divers buoyed the obstruction so the Corps of Engineers could remove it immediately.

Location: 29°19'08"N - 94°41'48"W

Effective depth: 20'

*Not included with FE-338 WD
(formerly H-9341 WD & H-9342 WD)*

I. GENERAL NOTES

Morning and evening calibrations were done by steering range #2 and observing left angle to the Galveston South Jetty Light. Numerous lane checks were taken at various navigational buoys.

Calibrations were not verified during Modified Processing.

Towlines of 800 ft. and 1000 ft. were used the majority of the time thus putting the end buoys 265m and 326m respectively from the Raydist antennae. One exception exists; due to a weakened section of wire, the end vessel's towline during the drag on E-day (Sheet 40-3-72) was 235m long. For plotting purposes it was considered to be the standard 265m length. The shortened towline apparently increased the strain on the ground wire sufficiently to cause excessive lift in the end section (11-F). Because of the lift and because that section fell in an area of excessive overlap, it was rejected throughout the entire strip. The elimination of the section 11-F still left the strip with more than the specified 600 ft. overlap.

On C day (Sheet 40-2-72), strip 1, section 7-8 was only 900' long rather than the usual 1000'.

A small drag was done to hang a reported obstruction 0.6NM and bearing 329° to the Galveston South Jetty Light. The control was combined Raydist and visual. An I-beam was located and then buoyed by divers for future

reference. Three point visual fixes were taken to establish the charted position, and the appropriate agencies and departments were notified. This unofficial drag was not recorded because the Corps of Engineers planned immediate removal of the I-beam. See Corps of Engineers Report on Holing of Dredge McKenzie in Attachment VI.

J. CURRENTS

Generally the current was from the NNW in the morning and rotated clockwise through ENE by evening. Occasionally a west to east current was encountered. Current tests were taken before the majority of drags by tracking a float connected to a vaned drogue suspended at the depth of the anticipated drag. Velocities were consistently less than 1 knot.

K. DISCREPANCIES WITH CHARTS

Charted depths over the flat bottomed areas was found to be accurate; the shoal areas were often 1 to 1 1/2 ft. shoaler than charted. Wire dragging of shoal areas was preceded by ship Reconnaissance Hydrography.

L. EQUIPMENT

The RUDE acted as Guide vessel; the HECK as End vessel. The launches and skiffs were used as tenders. Ship Hydrography was done with Raytheon DE-723 fathometers. Standard wire drag equipment was utilized throughout the survey.

M. MISCELLANEOUS

Early in June daily thundershowers resulted in tenuous Raydist transmission; frequent lane checks at navigational buoys were necessary to insure the desired accuracy. Numerous launch and skiff breakdowns hampered

progress. Leaky hydraulic lines to the drag winches of both ships caused ✓
minor delays. A one week in-port period was observed in late June for
repairs and maintenance.

N. SUMMARY

An obstruction was located at 29°19'08"N Latitude, 94°41'48"W Longitude ✓
with an effective depth of 20 ft. *Not on FE-338 WD,* ✓
The Army Corps of Engineers planned
immediate removal.

A reported 37 ft. shoal at 29°03'56"N Latitude, 94°18'04"W Longitude ^(NAD 1922) was
cleared to a depth of 41 ft. — *This feature is no*
longer charted.

*(Lat. 29°03'56.9"N (NAD 1983)
Long. 94°18'04.7"W)*

The safety fairways have been cleared at various depths to the 10 fathom ✓
curve.

O. RECOMMENDATIONS

Neither the obstruction near the Galveston South Jetty nor the reported 37 ✓
foot shoal area are recommended for charting. *Concur*

P. APPROVAL SHEET

All records of this survey prior to smooth plotting are hereby approved. The field work was personally supervised by the undersigned and the boatsheet and records were inspected daily. The survey is considered complete and adequate for charting.

L E Pickens
CDR. L.E. Pickens
Commanding Officer
NOAA Ships RUDE & HECK

LIST OF ATTACHMENTS

- I.. A) RAYDIST CONTROL STATIONS
 B) VISUAL CONTROL SIGNALS
- II. LIST OF GROUNDINGS & HANGS
- III. * A) DAILY RAYDIST CORRECTORS
 * B) ELECTRONIC CALIBRATION INFORMATION
- IV. * STATISTICS
- V. * AIDS TO NAVIGATION
- VI. * PROJECT INSTRUCTION
 * A) CHANGE #1
 * B) CHANGE #2
 * C) CHANGE #3
- VII. * RAYDIST STATION DESCRIPTIONS
- VIII. * A) TIDES, SMOOTH (~~NOT RECEIVED FROM ROCKVILLE~~)
 * B) REPORT, TIDE STATION
- IX. * BOAT SHEET & ELECTRONIC CONTROL PARAMETER SHEETS

* = Data removed from the Original Descriptive Report and filed with the field records.

ATTACHMENT I

A. RAYDIST CONTROL STATIONS

<u>STATION</u>	<u>LAT.</u>	<u>LONG.</u>	<u>REMARKS</u>
MOORE	29°14'03.520"N	94°52'54.136"W	Green
HANT	29°40'03.0909"N	94°04'20.73.56"W	Red

B. VISUAL CONTROL STATIONS

CALIBRATION RANGE #1

<u>SIGNAL</u>	<u>LAT.</u>	<u>LONG.</u>	<u>REMARKS</u>
Texas City Cut A			
Outer Rr. Range Lt.	29°19'55.804"N	94°44'45.322"W	Front Range
Bolivar Pt. Lighthouse	29°21'59.597"N	94°46'00.263"W	Rear Range
Galveston South Jetty Lt.	29°19'39.258"N	94°41'32.887"W	Right Obj.

CALIBRATION RANGE #2

<u>SIGNAL</u>	<u>LAT.</u>	<u>LONG.</u>	<u>REMARKS</u>
Galveston Bay	29°22'18.334"N	94°44'53.326"W	Rear Range
Ent. Ch. Rear			
Gal. Bay			
Ent. Ch. Front	29°21'16.821"N	94°42'56.635"W	Front Range
Gal. South			
Jetty Lt.	29°19'39.258"N	94°41'32.887"W	Left Object

These stations were not verified during Modified Processing.

ATTACHMENT II

LIST OF GROUNDINGS AND HANGS

POSITION No. & Dayletter	Bouy No.	Latitude	Longitude	Grounded Effective Depth	Cleared by Day & Strip No.	Cleared Effective Depth	Charted Depth	Remarks
		29°19'08"N	94°41'48"W	20'				Unofficial drag Corps of Engineers planned immediate removal of I-beam that was found.
		29°03'56"N	94°18'04"W	37' (reported)	F1	41'	42'	Reported grounding 37' depth

11/28/73

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center

Hourly heights are approved for

Tide Station Used (NOAA form 77-12): Galveston Pleasure Pier

Period: June-July 1973

HYDROGRAPHIC SHEET:

OPR: 479

Locality: Offshore, Galveston, Texas

Plane of reference (mean lower low water): 2.5 feet
which is feet on tide staff.

Height of Mean High Water above Plane of Reference is 2.1 feet

Remarks:

Zoning	Time Difference	Lat.	Long.
Area 1	-1.0 hr.	29°09'N	94°23'W
Area 2	-1.5 hr.	29°03'N	94°11'W
Area 3	-1.8 hr.	28°56'N	94°01'W
Area 4	-1.3 hr.	28°55'N	94°25'W



Chief, Tides Branch

N/CG244-47-90

LETTER TRANSMITTING DATA

TO:

Chief, Data Control Section, N/CG243
Room 151, WSC-1
Hydrographic Surveys Branch
National Ocean Service
Rockville, MD 20852

DATA AS LISTED BELOW WERE FORWARDED TO YOU
BY (Check):☐ ORDINARY MAIL☐ AIR MAIL☒ REGISTERED MAIL☐ EXPRESS☐ GBL (Give number) _____

DATE FORWARDED

23 July 1990

NUMBER OF PACKAGES
two (2)

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

FE-338WD (R/H-40-2-72)OPR-479, TEXAS, GULF OF MEXICO, SOUTHWEST OF HEALD BANK

Pkg. 1: (Box)

- 5 "WIRE DRAG" Volumes.
- 3 "SOUNDINGS" Volume.
- 1 Envelope containing Smooth Tides.
- 1 Envelope containing Verified Wire Drag Strips.
- 1 Envelope containing data removed from the Descriptive Report.
- 1 Accordion Folder (labeled 40-2-72) containing original field data of Oct. 24, 1972 and July 10-11, 1973.
- 1 Accordion Folder (labeled 40-3-72) containing original field data of Oct. 24, 1972, June 25-28, 1973 and July 11, 1973.

Pkg. 2: (Envelope)

- 1 Original Descriptive Report.

DO NOT DISCARD ANY OF THIS DATA.

FROM: (Signature)

Maurice B. Hickson, III
Maurice B. Hickson, IIIRECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Chief, Atlantic Hydrographic Section
N/CG244
Atlantic Marine Center
439 W. York Street
Norfolk, VA 23510-1114

D. S. Clark
8/8/90



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

DEC 27 1988

MEMORANDUM FOR: Lieutenant Commander William Wert, NOAA
Chief, Hydrographic Surveys Branch

FROM: *Russell C. Arnold*
Commander Russell C. Arnold, NOAA
Chief, Hydrographic Surveys Branch

SUBJECT: Processing of Wire Drag/Item, Buzzards Bay
Surveys

Per our December 1, 1988, meeting in Norfolk, I think we are in agreement that the subject surveys, most of which are now 5-15 years old, are well past due for processing. Obviously, your resources are not adequate to conduct full verification of these surveys without compromising other processing goals; a modified approach seems warranted to get these surveys off your inventory.

Buzzards Bay Surveys

Based on a cursory look at two of these surveys, they are not of sufficient quality to supersede the prior surveys in the area; many soundings and features from these prior surveys will need to be carried forward. These surveys do appear adequate, however, to provide supplemental information for charting.

I propose that you expend effort as outlined in your attached December 16, 1988, memo through verification of smooth sheet only. No evaluation and analysis need be done on these surveys. Sufficient priority should be given to this task such that all survey records and recommendations arrive in Rockville by June 30, 1989.

Wire Drag/Item Surveys

Attached is a prioritized list (supersedes 12/9/88 list) of surveys remaining in your inventory. Most of these surveys were conducted in areas where resurvey activity is scheduled in the near future (e.g., Long Island Sound, Rhode Island Sound, Calcasieu, Pascagoula). A cursory look at these surveys may be sufficient. We are primarily looking for information to update AWOIS. Unverified field recommendations may be adequate; we are willing to expand field resurvey effort to resolve items in lieu of waiting for full verification of prior surveys, which has historically resulted in recommendations for considerable resurvey work anyway. I believe that we are currently using better, more conclusive methods to resolve items more efficiently than ever before.



It is understood that our 6-month processing goal for current surveys will have to be temporarily relaxed to accomplish even modified processing of older surveys. However, current requirements for timely preprocessing examinations remain in effect as does the special request to process WHITING side scan sonar records in preparation for HECK's New Jersey Coast project.

Attachments

ADDENDUM TO ACCOMPANY SURVEY FE-338WD

1. INTRODUCTION

a. In accordance with the memorandum from CDR Russell C. Arnold, Chief, Hydrographic Surveys Branch, N/CG24, dated December 27, 1988, a modified approach to marine center processing of this survey was undertaken. Processing was limited to:

1) The verification of wire drag effective depths and positions on all hangs (except aids to navigation) and the clearance depths over these hangs. No hangs occurred during this survey.

2) The verification of all groundings. Ten groundings or areas of groundings occurred during this survey. Only one of these areas of grounding was in conflict with prior and charted hydrography. This area of grounding is addressed in section 2. of this report.

3) Charting recommendations based upon findings from the limited survey processing and a comparison with the latest largest scale charts of the area.

b. No plots were generated during processing. (There were no hangs and none of the groundings were significant.)

c. This survey was formerly registered as surveys H-9341WD and H-9342WD; the registry numbers of which have subsequently been rescinded.

2. CHARTING RECOMMENDATIONS FOR CHARTS 11330, 5th ED., JULY 30, 1988; AND 11323, 51st ED., SEPT. 23, 1989

These charts cover the entire surveyed area. The charted hydrography within the common area originates with prior surveys H-6251 (1937), H-6252 (1937), and H-8737 (1962-63) and subsequent surveys H-9775 (1978) and H-10111 (1983) and from sources not readily available. These surveys are the most recent surveys of the common area that were available during processing. However, the source of most of the charted hydrography is from sources that are not readily available.

The topography of this surveyed area is generally characterized by a relatively gentle sloping bottom. The surveyed area is the southwestern part of the feature that makes up Heald Bank. The charted feature Heald Bank lies to the northeast of the surveyed area. The hydrographer made note in the Descriptive Report (section K.) that the shoal areas investigated were found to be 1-1½ feet shoaler than charted. The reconnaissance hydrography run in support of this survey was not processed during modified processing.

No oil platforms were found but one ("ARCO-HI-A20-A") is charted within the area of the present survey. This platform (in Latitude 29°03'41", Longitude 94°16'10") was evidently constructed after 1972. There are no charted wrecks or obstructions common to the present survey. Several areas of shoaling within the common area of this survey are presently charted, but all of these were reported years after this survey was completed. As previously noted, no hangs occurred during this survey. Of the ten groundings on this survey, only one apparently conflicted with prior, subsequent, and charted hydrography. This grounding occurred in the area of Latitude 29°03'03"N, Longitude 94°18'41"W at an effective depth of 50 feet in prior depths of 41-44 feet. This area of grounding was not cleared. This grounding occurred because the hydrographer set out the drag aground to drag into deeper water. This grounding is not smooth plotted and is not recommended to be charted nor is any additional field work recommended due to this grounding.

In the vicinity of Latitude 29°04'N, Longitude 94°18'W, several prior and two subsequent soundings are in conflict with (shoaler than) present effective depths. All but two prior soundings are in conflict by only one foot. A prior 48-foot sounding and a prior 43-foot sounding are in an area cleared by the present survey by an effective depth of 50 feet. These conflicts are attributed to the changing nature of this shoal area. These conflicts are not considered significant. Also a charted 35-foot sounding (in Latitude 29°05'26"N, Longitude 94°16'02"W, source unknown) is in an area cleared by the present survey by an effective depth of 36 feet (estimated). This charted 35-foot sounding is not evident on any of the prior (43') or subsequent (44') surveys common to this area. It is recommended that this sounding be researched and if not disproved through research, then additional field work will be necessary for disproval.

3. RECOMMENDATIONS FOR ADDITIONAL WORK

From the wire drag data presented by this survey, no additional field work is recommended. Based on the hydrographer's statement pertaining to shoaling in section K. of the Descriptive Report, additional work may be considered to determine if shoaling in this area is occurring, and if so, the extent of the shoaling. The subsequent hydrographic surveys indicate deepening trend in this area, rather than shoaling. There are several reported shoal soundings charted in this area and additional field work should be considered to resolve these charted features.

Verification and
Recommendations by,

Checked by,

Maurice B. Hickson, III
Maurice B. Hickson, III
Cartographer
Evaluation & Analysis Team

R. D. Sanocki
R. D. Sanocki
Chief, Hydrographic
Processing Unit

APPROVAL SHEET
FE-338WD

Initial Approvals:

The completed wire drag survey has been examined with regards to presentation of survey results. The survey complies with National Ocean Service requirements except as noted in the Addendum to the Descriptive Report. This survey is not to be considered a basic hydrographic survey and is not approved as such. Only the data that has been verified and addressed in the Addendum to the Descriptive Report is approved for charting. There will be no digital file accompanying this survey.

R. D. Sanocki
R. D. Sanocki
Chief, Hydrographic Processing Unit
Atlantic Hydrographic Section

Date: 7-11-90

I have reviewed the survey data and reports. The verified data meet or exceed NOS requirements and standards for products in support of nautical charting except as noted in the Addendum to the Descriptive Report.

Christopher B. Lawrence
Christopher B. Lawrence, CDR, NOAA
Chief, Atlantic Hydrographic Section

Date: July 13, 1990

Final Approval:

Approved: Wesley V. Hull
Wesley V. Hull
Rear Admiral, NOAA
Director, Charting and
Geodetic Services

Date: August 9, 1990

EXAMINED FOR NIM

GDBU

9-7-90 JB

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

SUPERSEDES CAGS FORM 8352 WHICH MAY BE USED